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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,327	01/22/2004	Arkadiy Peker	PDS-015	2698
7590	07/12/2007		EXAMINER	
POWERDSINE, LTD. c/o LANDON STRK CANTWELL & PAXTON ,2011 CRYSTAL DRIVE, ONE CRYSTAL PARK SUITE 210 ARLINGTON, VA 22202-3709			PARRIES, DRUM	
			ART UNIT	PAPER NUMBER
			2836	
			MAIL DATE	DELIVERY MODE
			07/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/761,327	PEKER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dru M. Parries	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 January 2004.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-47 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-43, 46 and 47 is/are rejected.  
 7) Claim(s) 44 and 45 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 22 January 2004 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>6/04 &amp; 12/04 &amp; 1/05 &amp; 2/06</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 18, 19 and 46-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The terminology in these claims is indefinite and requires further explanation. For example, in claim 18 it states, “operable to signal at least one of (the output lines)...” and in claim 46 it states, “signaling at least one source...” These phrases don’t make sense. How does one “signal” an output line? Also, how does signaling these devices comprise changing the classification? Appropriate explanation/changes are required. The Examiner will interpret claim 18 as meaning the combiner will output a signal associated with the first or second power output when the combiner is operable to produce said high power output, and claim 46 as meaning once combined, a signal associated with one of the sources of received power will be output.

### ***Claim Objections***

3. Claim 46 is objected to because of the following informalities: there is a typo in j). The phrase “at least one of” is duplicated in this claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-10, 12, 14-16, 18-20, 23, 27, 30-31, 35-36, 43, and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) and Barnes et al. (2005/0040785). APA teaches a powered device (80), a hub (30), and communication cabling (60) connecting the powered device to the hub comprising first and second set of wire pairs carrying power and/or data. APA also teaches first and second power outputs being associated with midspan power insertion equipment (160) and the first and second power outputs being isolated from each other. APA teaches the first and second power outputs comprising separate outputs derived from a single power source (40). APA also teaches a second set of wires (bottom of Fig. 1a) used for communicating data (Figs. 1a-1c). APA fails to teach a combiner that combines the received first and second power and outputs a high power output. Barnes teaches a combiner (140) that receives a plurality of power inputs (102, 104, 114, 130) and capable of outputting a high power output. He also teaches outputting a voltage to the powered device depending on the voltage needed by the device. He also teaches a controller (136) in the combiner that senses successful operation of the combiner and outputs a high power output to a

powered device (190). He also teaches a DC/DC converter in the combiner. (Fig. 1; [0026-0027]; [0036]) It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Barnes' combiner into APA's invention between the power output lines and the powered device, so that the output power to the device can be precise with regards to the load demand. It also would have been obvious to one of ordinary skill in the art at the time of the invention to place the combiner inside or outside of the powered device, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. Also, now that the combiner has been modified into APA's invention, the first and second power outputs are not isolated from one another after they have been combined in the combiner. Also, the combiner produces an output voltage (the signal), associated with the first or second power output (or source), whose magnitude is determined by the class (type) of the load (magnitude=class identification).

7. Claims 11, 13, 21, 22, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) and Barnes et al. (2005/0040785) as applied to claims 1, 10, 12, 20, and 27 above, and further in view of Elkayam et al. (2003/0099076). APA and Barnes teach an electrical system as described above. They fail to explicitly teach the equipment conforming to the IEEE 802.3af standard, and what the powered device (80) is. Elkayam teaches a Power over LAN network with equipment conforming to the IEEE 802.3af standard (bottom of [0003]). He also teaches a powered device being a laptop computer, among other things ([0069]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the equipment conform to the IEEE 802.3af standard, since one would know the precise characteristics of the equipment being used and it gives the ability to know the

type of systems that this equipment can function in. It also would have been obvious to one of ordinary skill in the art at the time of the invention to implement a laptop computer into APA's invention as the powered device since APA was silent as to the type of device it is, and Elkayam teaches a device known in the art to be used in this type of system.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) and Barnes et al. (2005/0040785) as applied to claim 1 above, and further in view of Parsi et al. (6,856,629). APA and Barnes teach an electrical system as described above. They fail to explicitly teach the hub operating according to 10 Base-T. Parsi teaches a network comprising a hub operating according to 10 Base-T (bottom of Col. 6, top of Col. 7). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the hub operate according to 10 Base-T since APA was silent as to the operation of the hub and Parsi teaches a method of operation known in the art to work.

9. Claims 24-26 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), Barnes et al. (2005/0040785), and Elkayam et al. (2003/0099076) as applied to claims 1, 20, 22, and 27 above, and further in view of Orenstien et al. (2003/0126377). APA, Barnes, and Elkayam teach an electrical system as described above. Barnes also teaches outputting a voltage to the powered device depending on the voltage needed by the device [0027]). These references fail to explicitly teach the load (i.e. laptop computer) operable in high and low power modes. Orenstein teaches a computer operable in high and low power modes (Abstract). He also teaches that in low power mode, less power is supplied to the computer ([0037]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have a computer operable in high and low power modes, so that power can be

conserved while the computer is idle. This means that Barnes' combiner will supply a lower voltage during low power mode to the computer, and this lower voltage is the signal to the load of the low power supply operation.

10. Claims 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) and Barnes et al. (2005/0040785) as applied to claim 27 above, and further in view of Germagian et al. (6,894,457). APA and Barnes teach an electrical system as described above. They fail to teach the first and second power inputs each associated with a DC/DC converter. Germagian teaches a power source with a plurality of outputs supplying a variety of electrical equipment. He also teaches DC/DC converters associated with each power input. (Col. 7, lines 1-18) It would have been obvious to one of ordinary skill in the art at the time of the invention to implement DC/DC converters on each power input line for creating a desired voltage level to deliver to each powered device (or the combiner). This also means that the first and second power inputs would have DC/DC converters in series. The first power input will have its DC/DC converter associated with it, as taught by Germagian, and the second power input will have the combiner's DC/DC converter associated with it, wherein those two converters would be in series.

11. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), Barnes et al. (2005/0040785), and Germagian et al. (6,894,457) as applied to claims 27 and 37 above, and further in view of Charych (2004/0080962). APA, Barnes, and Germagian teach an electrical system as described above. They fail to explicitly teach a PWM controller associated with each DC/DC converter. Charych teaches the use PWM controllers in DC/DC converters in systems powering laptop computers ([0004]). It would have been obvious to one of

ordinary skill in the art at the time of the invention to control the DC/DC converters on the power input lines via PWM, since Germagian was silent as to how they are controlled and Charych teaches a method known to work in the laptop computer art.

12. Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) and Barnes et al. (2005/0040785) as applied to claim 27 above, and further in view of Larner (4,028,559). APA and Barnes teach an electrical system as described above. They fail to explicitly teach the inner workings of the Barnes' combiner. Larner teaches a combiner comprising a transformer (T) having a first primary (b-a) associated with a first power input (VZ1), a second primary (b'-c) associated with a second power input (VZ2), and a secondary (d-e) associated with a combined higher power. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement Larner's combiner circuitry into the combiner of the modified APA invention since Larner teaches a configuration that is known in the art and the other references were silent as to the configuration.

*Allowable Subject Matter*

13. Claims 44 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dru M. Parries whose telephone number is (571) 272-8542. The examiner can normally be reached on Monday - Thursday from 9:00am to 6:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry, can be reached on 571-272-2800 x 36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMP

6-19-2007



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